

Delco[®]

Pressure Washers

VERSA 100

VERSA 100C
PN 09043X
PN 09043D

VERSA 200C
PN 09041E
PN 09041C (S.S.)

Operators Manual and
Replacement Parts Book

Rev1 11-07

Delco Pressure Washers - LIT-VER1-DEL

FNA
G R O U P

LIMITED WARRANTY

At DELCO® CLEANING SYSTEMS, we distribute top quality industrial / commercial / personal pressure washers that are designed for heavy-duty use, maximum reliability, durability, and long life. Our pressure washers are built for all duty applications and steady use due to higher quality levels.

The manufacturer of this product agrees to repair or replace designated parts that prove defective within the warranty period of one (1) year listed in the chart. Specific limitations/extensions and exclusions apply, and are listed in the chart on page 3. This warranty covers defects in material and workmanship and not parts failure due to normal wear; abuse; accidental damage; negligence; improper use, maintenance, and storage. To make a claim under the terms of the warranty, all parts said to be defective must be available or returned (if requested) to DELCO® CLEANING SYSTEMS designated Warranty Service Center for warranty inspection. The judgments and decisions of the Warranty Service Center concerning the validity of warranty claims are final.

These warranties pass through to the end user. As a factory authorized and trained Warranty Service Center the factory will honor the terms of all component warranties and satisfy claims of the appropriate warranty provisions.

Normal wear items include, but are not limited to, Valves and Seals, which are not covered by this warranty.

This Warranty replaces all other warranties, express or implied, including without limitation any warranties of merchantability or fitness for a particular purpose and all such warranties are hereby disclaimed and excluded by the manufacturer. The Manufacturer's warranty obligation is limited to repair and replacement of defective products as provided herein and the Manufacturer shall not be liable for any further loss, damages, or expenses – including damages from shipping, accident, abuse, acts of God, misuse, or neglect. Neither is damage from repairs using parts not purchased from the manufacturer or alterations performed by non-factory authorized personnel. Failure to install and operate equipment according to the guidelines put forth in the instruction manual shall void warranty.

This warranty does not cover the following: damage resulting from shipping (claims must be filed with freighter), accident, abuse, act of God, misuse, or neglect. Neither is damage from repairs or alterations performed by non-factory authorized personnel or failure to install and operate equipment according to the guidelines put forth in the instruction manual.

The manufacturer will not be liable to any persons for consequential damage, for personal injury, or for commercial loss.

LIMITED WARRANTY (cont)

<u>Parts / Components</u>	<u>Warranty Period and Details</u>
High Pressure Pumps	Five (5) year limited manufacturer warranty on pump workmanship and defects in material. Lifetime on forged brass manifold. Warranty does not apply to failures on other pump parts due to: <ul style="list-style-type: none">• Freight damage• Freeze damage• Damage caused by parts or accessories not obtained from / or approved by Delco• Normal wear of moving parts or components affected by moving parts.
Engines	Covered by engine manufacturer warranty. See engine manual.
Electric Motors (if applicable)	One (1) year from date of first start up.
Burners (hot water machines)	One (1) year from date of first start up.
Hot Water Burner Coil (hot water machines)	Five (5) years from date of first start up. Warranty only covers workmanship or defects of material. Warranty does not apply to: <ul style="list-style-type: none">• Freeze Damage• Over Pressure burst damage caused by improper maintenance of safety devices.
Frame	One (1) year from date of first start up.
Accessories	Ninety (90) days. Includes tips, guns, wands,

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OPERATOR SAFETY INSTRUCTIONS



WARNING



AVERTISSEMENT



ADVERTENCIA

DANGER means:	Severe bodily injury or death can occur to you or other personnel if the DANGER statements found on your machine or in your Owner's Manual are ignored or are not adhered to. Read and observe all DANGER statements found in your Owner's Manual and on your machine.
WARNING means:	Injury can occur to you and to other personnel if the WARNING statements found on your machine or in your Owner's Manual are ignored or are not adhered to. Read and observe all WARNING statements found in your Owner's Manual and on your machine.
CAUTION means:	Damage can occur to the machine or to other property if the CAUTION statements found on your machine or in your Owner's Manual are ignored or are not adhered to. Read and observe all CAUTION statements found in your Owner's Manual and on your machine.



WARNING: Do not use gasoline, crankcase drainings, or oil containing gasoline or solvents.

ADVERTISSEMENT: Ne pas utiliser d'essence, de produits de vidange ni d'huile contenant de l'essence ou des solvants.



WARNING: This machine is not to be connected to a type B gas vent.

ADVERTISSEMENT: Ne pas raccorder cet appareil à un tuyau d'évacuation de gaz du type B.



WARNING: Risk of injection or severe injury. Keep clear of nozzle. Do not direct discharge stream at persons. This equipment is to be used only by trained persons.

ADVERTISSEMENT: Risque d'injection et de blessures graves. Se tenir à l'écart du jet. Ne pas diriger le jet de sortie vers d'autres personnes. Confier l'utilisation de ce matériel à un opérateur qualifié.



WARNING: If you smell gas, shut off the gas supply to the appliance, extinguish any open flame, and test all joints with a soap solution. If the odor persists, call your gas supplier immediately.

ADVERTISSEMENT: Si une odeur de gaz est décelée, couper l'alimentation en gaz de l'appareil, éteindre toutes les flammes et vérifier tous les raccords à l'aide d'une solution savonneuse. Si l'odeur persiste, avertir immédiatement le fournisseur de gaz.



DANGER: Failure to read the Owner's Manual prior to using this machine could result in injury to you or to other personnel; damage to the machine or to other property could occur as well. You must have training in the operation of this machine before using it. If you or your operator(s) cannot read English, have this manual explained fully before attempting to operate this pressure washer.



DANGER: Machines can cause an explosion when operated near flammable materials and vapors. Do not use this machine with or near fuels, grain dust, solvents, thinners, or other flammable materials.



DANGER: This machine emits carbon monoxide. Asphyxiation could occur if the unit is used in an area with poor or inadequate ventilation. Operate unit in a well-ventilated area. Do not connect the exhaust stack directly to a flue pipe. This may cause soot of the combustion chamber. If you must vent to the outside use a hood type vent or an exhaust fan. Install flue pipes in accordance with all local codes.



DANGER: Operating a machine that is not completely or fully assembled could result in injury or property damage. Do not operate this machine until it is completely assembled. Inspect hoses, fittings, and heat exchanger for leaks or fatigue before each use.

DANGER: Filling a machine with fuel in an explosive or poorly-ventilated area can cause an explosion. Only fill the fuel tank in an open area. Do not fill the tank near open flames or while the unit is running. Do not smoke while filling the tank. Do not over-fill the tank. Wipe up any spills. Tighten the cap on the tank when finished. Use kerosene, or #1 or #2 diesel as a fuel only. **Do not use K-1 kerosene.**

DANGER: Tampering with the machine's factory preset unloader valve setting and/or the pressure relief valve setting could result in a machine explosion. Do not attempt to change the settings. Discontinue use if a malfunction occurs and contact your local authorized Delco distributor.

DANGER: Operating a pressure washer with a malfunctioning burner or burner controls could result in a machine explosion. Inspect burner and burner control operation before each use. If you suspect a problem with the burner, discontinue use immediately and contact your local authorized Delco distributor for assistance.

DANGER: Failure to properly maintain the heat exchange coil can result in a steam explosion. Scale or lime build-up will act as an insulation and decrease the efficiency of the heat exchanger coil and will also cause hot spots. This can result in a weakening of the tubing which in turn may cause a rupture. **Reference the Operator Safety Manual, part no. 78336A for more information on maintenance of the heat exchange coil.**

DANGER: Operating a machine with a ground fault circuit interrupter (GFCI) that has been tampered with, or one that repeatedly trips, could result in an electrocution. Do not remove, disable, or tamper with the GFCI. If the ground fault circuit interrupter repeatedly trips, discontinue use of the machine. Contact your local authorized Delco distributor for assistance with the GFCI.

DANGER: Electrocution could occur if the machine is used on a power circuit that repeatedly trips or is undersized. Have a licensed electrician check the fuse, circuit breaker or power supply, and/or contact your local authorized Delco distributor for assistance.

DANGER: Electrocution could occur if maintenance and repairs are performed on a unit that is not properly disconnected from the power source. Disconnect the power supply before attempting any maintenance or service.

DANGER: Use of this machine with a damaged power cord could result in an electrical shock. Do not use the machine if the power cord is damaged. Do not use the electrical cord to move the machine.

WARNING: Water under high pressure can cause severe injury. Keep all persons away from the machine and the spray area. Always point the wand toward the object being cleaned.

WARNING: Injury to the operator or bystanders could occur if the machine is operated without all of the guards being in place on the unit. When operating the machine, all guards must be in place.

WARNING: Operating a pressure washer under high pressure without a securely fastened hose, gun and spray nozzle(s) could result in bodily injury or property damage. Make sure the spray nozzle, gun and hose are securely fastened before operating the machine. Do not remove the nozzle or disconnect the high pressure hose while the system is pressurized and/or running.

WARNING: Machines have moving parts and hot areas that can cause injury. Keep hands, feet, and loose clothing away from the pressure washer while it is running. After use, allow an adequate amount of cool-down time before attempting to perform any maintenance or service to this unit.

WARNING: Failure to wear safety goggles and protective clothing when operating a pressure washer reduces operator safety. Always wear safety goggles and protective clothing when the machine is running or when operating machine.

WARNING: Operating this pressure washer without the appropriate decals could result in operator injury or damage. Make sure all labels and instructional information are fastened to the machine. Get new labels and decals from your Delco distributor.

CAUTION: Maintenance and repairs performed by unauthorized personnel could result in damage or injury. Servicing of this unit must always be referred to an authorized Delco distributor.

⚠ CAUTION: Maintenance and repairs performed by unauthorized personnel will void your warranty. Servicing of this unit must always be referred to an authorized Delco distributor.

⚠ CAUTION: Electrical damage can occur if the machine is exposed to direct and/or over spray. Always point the wand toward the object being cleaned.

⚠ CAUTION: Using an extension cord with your pressure washer will result in a voltage drop and loss of power. Use of an extension cord is not recommended.

⚠ CAUTION: Use of this machine to move other objects or to climb on could result in injury or damage.

⚠ CAUTION: Operating a pressure washer when the pump is low on oil could cause pump damage. Always check your oil before using the machine. Use SAE 30 weight oil.

⚠ CAUTION: Operating a pressure washer with insufficient water flow can damage the pump. Water should be turned on full-force to avoid insufficient water flow.

⚠ CAUTION: Pump damage could occur if the pressure washer is ran for more than five (5) minutes with the trigger released (closed).

⚠ CAUTION: Your machine warranty will be voided if anything other than genuine Delco parts are used on your pressure washer. Always use Delco parts for replacement.

INTRODUCTION & MACHINE SPECIFICATIONS

The Versa 100 and 200 series' are equipped with a ceramic plunger pump producing 2.5 - 3.6 gpm at 1,000 - 1,200 psi. Standard equipment features include a low water shut-off switch, a high limit temperature switch for prevention of machine overheating and a heavy duty 35 ft. power cord with a ground fault circuit interrupter (GFCI) for operator safety. Features of the Versa 100 and 200 series are hose wraps, hardened stainless steel nozzles with quick disconnects and a heavy duty Schedule 80 heating coil. The Versa 100's and 200's are also available in stainless steel models. Optional shutdown is available on trigger-gun control models.

	Versa 100	Versa 100C	Versa 100C SS	Versa 200C	Versa 200C SS
Flow Rate (GPM)	2.5 ¹	2.5 ¹	2.5 ¹	3.6 ¹	3.6 ¹
Pressure (psi)	1000	1000	1000	1200	1200
Motor/Voltage	2 hp/115 V	2hp/115V	2hp/115V	3hp/230V	3hp/230V
Amps	19	19	19	26	26
Min. Circuit Amp.	20	20	20	30	30
Fuel	Kerosene, #1 or #2 Diesel				
BTUH Input	231,000	231,000	231,000	231,000	231,000
Temperature Rise (°F)	140° F ¹				
Pump	Triplex Plunger				
Soap Metering Valve	1/4" adjustable				
Heat Exchanger	7/8" O.D. tubing				
Coil	12 guage wall				
Power Cord	35' GFCI				
Spray Control	Open gun	Trigger gun	Trigger gun	Trigger gun	Trigger gun
Hose	3/8" x 50' R1 wire braided				
Wheels	Stud tread-tubed Aluminum mag				
Dimensions (in.)	L57xW28xH36	L57xW28xH36	L57xW28xH36	L57xW28xH36	L57xW28xH36
Weight (lbs)	490 lbs.				

¹ Actual values may vary 5%

OPERATING INSTRUCTIONS

NOTE: Following delivery of your Delco pressure washer, inspect the unit for shipping damage and follow these directions:

1. Read all DANGER, WARNING, and CAUTION labels. Read the Owner's Manual that came with your machine before attempting to operate the pressure washer.
2. Fill the fuel tank with kerosene, or #1 or #2 diesel. **Do not use K-1 kerosene.**
3. Locate the unit in a convenient location.
4. Securely fasten the pressure hose connections.
5. Apply pipe sealant or tape at all connections.
6. Connect the water supply and turn it on full force.
7. Check all hose connections for leaks.
8. Check the oil level in the pump before starting the pressure washer.
9. Connect the high pressure hose to the gun.
10. Connect the extension wand to the gun.
11. Connect the power cord to an appropriately sized three-wire grounded circuit. The circuit chosen should have no other loads present and should be of the shortest possible length to the main circuit panel. **Test.**
12. Turn the machine to the "OFF" (O) position, before resetting the GFCI.
13. Point the wand towards the floor.
14. Turn the control switch to position one (I) "cold water wash". While pointing the wand toward the floor, squeeze the trigger on the gun and allow air to purge from the system. Check the system for leaks.
15. Turn the machine to the "OFF" position (O).
16. Install the nozzle(s) onto the gun.
17. Turn the control switch back to the "cold water wash" (I) position and squeeze the trigger to establish water flow.
18. Turn the control switch to position two (II) "hot water wash". The burner should automatically come on.

DANGER: Operating a pressure washer that doesn't have proper water flow could result in an explosion. If water should stop flowing from the gun, turn unit off immediately and contact an authorized Delco service person.

NOTE: On initial start-up, or if the unit runs out of fuel during use, there will be a slight hesitation as the fuel system purges air. Only under these circumstances should there be any hesitation present.

After the burner lights there should be no visibly apparent smoke. If your unit is a trigger control, release the trigger. The unloader should activate and the flame should cease on the burner automatically.

OPERATING INSTRUCTIONS - Cont'd

19. Point the wand towards the object to be cleaned and proceed with cleaning.
20. For chemically enhanced cleaning follow this procedure:
 1. Open the metering valve.
 2. Turn the control switch to position one (I) "cold water wash". While pointing the wand toward the floor, squeeze the trigger on the gun and allow air to purge from the system. Check the system for leaks.
 3. Dial the metering valve to the desired chemical concentration.
 4. Point the wand towards the object to be cleaned, squeeze the trigger, and proceed with cleaning.
 5. To rinse with clean water, close the metering valve and continue spraying.
 6. Flush the chemical feed line with fresh water after each use by placing the end of the chemical feed line into a container of clean, fresh water. Run the unit in the cold water wash position (I) until all traces of the chemical are gone.



DANGER: **Allowing the detergent level to fall below the chemical feed line opening feeds air into the system which could cause a steam explosion. Air introduced into the system will cause pump damage and create steam space if the burner is on. The detergent level should never fall below the chemical feed line opening. If you should discover this condition, immediately turn the metering valve off.**

21. Following hot water washing, turn the control switch to position one (I) and run cold water through the unit until the water exiting the wand is cool, or until the wand is cool to the touch. This period of time can be spent on a cold water rinse.
22. Turn the machine to the "OFF" position (O) and disconnect the power cord.
23. Turn the water supply off and disconnect all hose connections from the machine.
24. Drain hoses and wipe down the unit.
25. Store the machine, hoses, and any accessories in a dry place.

MAINTENANCE

How To Check The Oil

It is critical that the oil in your machine be checked regularly. To check the oil follow this procedure:

1. Locate the oil dipstick in the plug on the top of the machine.
2. Turn the oil plug counterclockwise.
3. Wipe the dipstick with a clean cloth.
4. Screw the dipstick in. Pull it back out and check for the oil level mark. The oil level should be at the top mark.

MAINTENANCE - Cont'd.

5. If the oil is below the notch, add SAE 30 weight, non-detergent oil.
6. Put the dipstick back into the hole.
7. Turn the plug clockwise until it stops.

NOTE: Change the oil after the first 50 hours of use and then after every 500 hours of use. SAE 30 weight oil must be used.

Freeze-Up Prevention

To prevent freeze-up follow these instructions:

1. Drain the float tank.
2. Remove the spray nozzle from the wand.
3. Mix antifreeze concentrate and water in a large container. Read the recommended mixing instructions given with the antifreeze.
4. Fill the float tank with the antifreeze mixture.
5. Put the end of the chemical line in the float tank. Fully open the metering valve.
6. Turn the control switch to position one.
7. Let the pump run until the antifreeze moves through the pump, coils, and pressure hose.

NOTE: The trigger on the gun must be pulled to allow antifreeze to pass through the coils, and then the trigger must be released to allow the antifreeze to pass through the bypass line.

8. Turn the control switch to the "O" position and close the metering valve.
9. Unplug the cord and put the machine in a dry building.

How to Check/Clean the Heat Exchange Coil

The heat exchange coil should be inspected for deposit build-up after 40 hours of use, or once a month, whichever comes first. In hard water areas a water softening system should be employed.

Scaling or liming of the coils is caused by mineral deposits from the water and occurs much faster in hard-water areas and with heavier machine usage. Lime build-up can also be caused by inferior cleaning compounds.

⚠ DANGER: Failure to properly maintain the heat exchange coil can result in a steam explosion! Scale or lime build-up will act as an insulation and decrease the efficiency of the heat exchanger coil and will also cause "hot spots". This can result in a weakening of the tubing which can lead to a steam explosion.

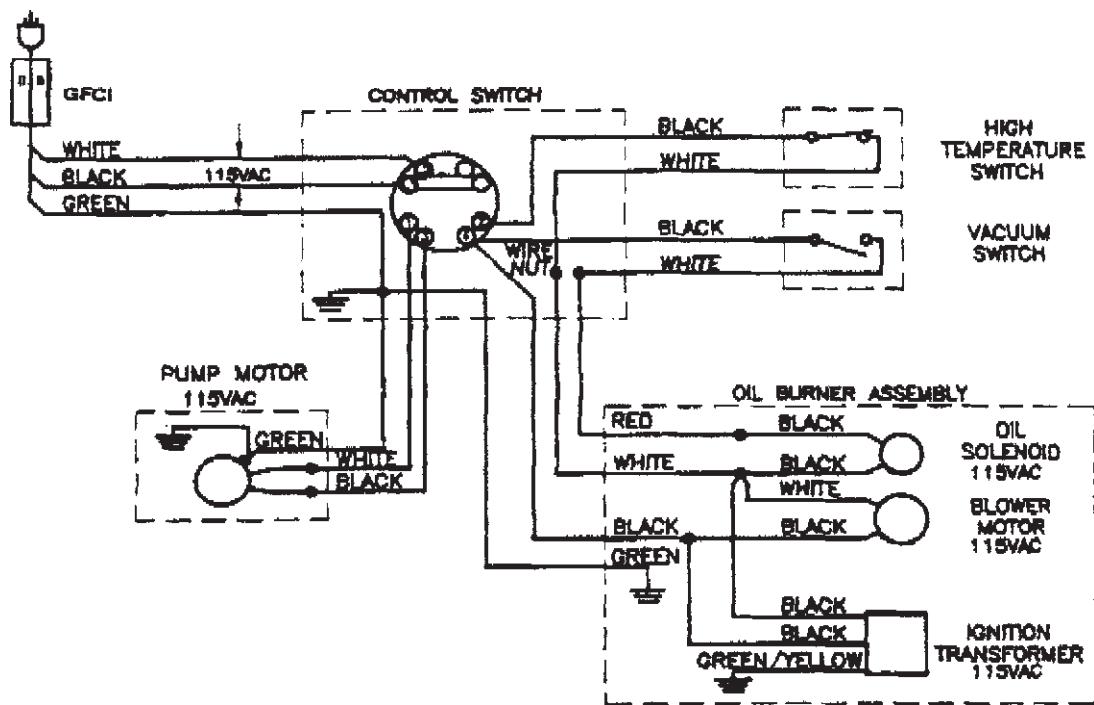
Explicit instructions for inspecting and cleaning the heat exchange coil can be found in your Delco Operator Safety Manual that came with your pressure washer. The part number for that manual is 78351A. If you didn't receive one when you bought your pressure washer contact your local Delco distributor and request one or call Delco's customer service department at 1-800-BUY-DELCO.

HOW TO CORRECT PROBLEMS IN THE MACHINE

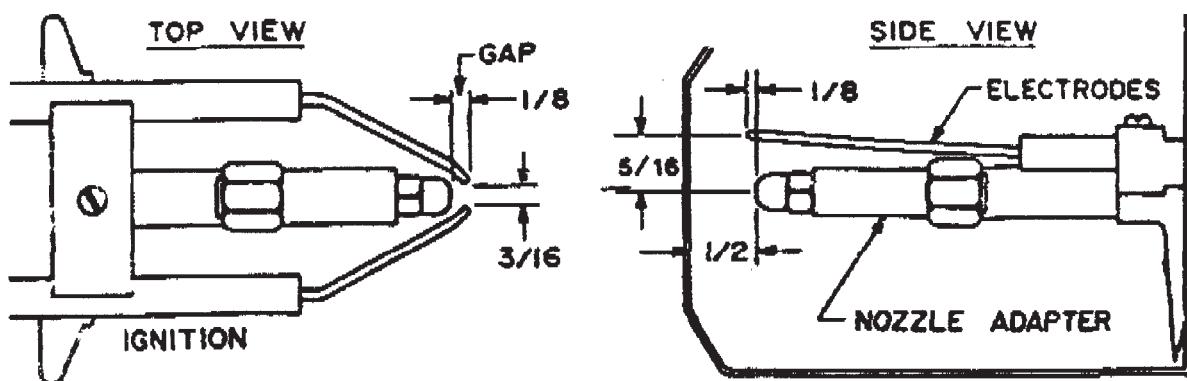
Problem	Cause	Action
The motor will not start	Power cord may not be connected. Switch may not be turned "ON". Ground fault circuit interrupter did not reset. The power cord may be connected to a dead outlet. May have a defective motor, GFCI, or switch. The thermal overload switch tripped.	Connect the power cord. Turn switch to "ON". Reset the ground fault circuit interrupter. Contact a licensed electrician. Contact your authorized Delco dealer. Allow motor to cool, reset thermal switch.
The motor has difficulty starting or is overheating.	Circuit may be too long, overloaded, or conductors may be undersized. Incorrect voltage or frequency. The motor is wet. The coils are limed. The spray nozzle is obstructed.	Locate the outlet nearest to the circuit panel which can be reached with the cord supplied with the machine. Check the voltage and frequency. Contact an authorized Delco service person. Delime the coils. Remove and clean the nozzle.
The pump overheats.	The oil level is low. The machine has been running for an extended period of time with the trigger gun off.	Fill to the proper oil level with high quality SAE 30-weight non-detergent oil. Immediately press the gun release lever to allow cool water to flow into the pump.
The pump vibrates.	The pump is sucking air. The pump check valves are dirty.	Contact an authorized Delco service person. Contact an authorized Delco service person.
The pump surges when the trigger gun is off.	There is a leak. The unloader valve is not adjusted correctly.	Check all fittings. Keep fasteners tight. Contact an authorized service person. Contact an authorized Delco service person.
The pump is running but the pressure is low on installation.	The pump is sucking air. The pump valves are sticking. The unloader valve is worn. The nozzle is not the correct size. The pump plunger packing is worn.	Make sure the water supply is correct, metering valve closed, or solution above above feed line. Contact an authorized Delco service person. Contact an authorized Delco service person. Replace the nozzle. Contact an authorized Delco service person.
The pressure is changing.	The pump valves are worn. The pump valves are dirty. The pump is sucking air. The pump plunger packing is worn.	Contact an authorized Delco service person. Contact an authorized service person. Check the water supply. Make sure all connections are tight. Contact an authorized Delco service person.
The pressure is low after normal use.	The spray nozzle is worn. The pump check valves are worn or dirty. The unloader valve is worn. The pump plunger packing is worn.	Replace the nozzle. Contact an authorized Delco service person. Contact an authorized Delco service person. Contact an authorized Delco service person.
The pump is noisy.	There is air in the suction line.	Check the water supply. Make sure all fittings are tight.
There is/has been water in the oil.	The valves are dirty. The bearings are worn. The incoming liquid is too hot. The suction or delivery valve springs are worn. The oil seal is worn. The humidity is high. The plunger packing is worn.	Contact an authorized Delco service person. Contact an authorized Delco service person. Reduce the temperature to below 90°. Contact an authorized Delco service person. Contact an authorized Delco service person. Contact an authorized Delco service person. Contact an authorized Delco service person.
There is water dripping from under the pump.	The plunger packing is worn. The plunger retainer O-ring is worn.	Contact an authorized Delco service person. Contact an authorized Delco service person.

Problem	Cause	Action
Oil is dripping.	The oil seal is worn. The spray nozzle is not the correct size.	Contact an authorized Delco service person. Install a new nozzle.
The pressure is too high and is released at the unloader or pressure relief valve.	The coils are limed. The spray nozzle is obstructed.	Delime the coils. Clean the nozzle.
The machine does not pick up the cleaning solution.	The metering valve is leaking air. The screen on the chemical line is dirty.	Tighten all fittings on the valve. Clean the filter. Replace if damaged.
The pressure is surging.	The spray nozzle is obstructed. The spray nozzle is not the correct size.	Clean the nozzle. Install a new nozzle. Use only a nozzle recommended for the machine.
The gun and the hose are vibrating.	There is an air leak. There is not enough water. The check valve in the pump is damaged.	Tighten all fittings on the suction side of the pump. Check the water level in the tank. Contact an authorized Delco service person.
The unloader or pressure relief valve is leaking.	The valve is not correctly adjusted. The unloader, pressure relief valve, or seat is worn or damaged. Contact an authorized Delco service person. The nozzle is dirty. There is a restriction in the discharge hose. There is a restriction in the coil.	Contact an authorized Delco service person. Clean the nozzle. Remove the nozzle and flush the line. Clean the coil.
The burner will not start.	The fuel tank is empty. The fuel filter is dirty. The burner motor does not run. The burner is not turned on.	Fill the fuel tank with either #1 or #2 diesel, or kerosene. Change the fuel filter. Push the reset button on the burner motor. If the burner still does not start, contact an authorized service person. Turn the switch to the "ON" position (II).
The pressure is low.	There is an air leak. The belts are loose. The spray nozzle is worn. The water supply is too low. The check valves in the pump are worn or dirty. The plunger packing is worn. The spray nozzle is the wrong size.	Contact an authorized Delco service person. Tighten the belts. Install a new nozzle. Increase the water supply. Make sure the garden hose is 5/8" I.D. Contact an authorized Delco service person. Contact an authorized Delco service person. Use only the nozzle recommended for the machine.
The water temperature is too low.	The fuel nozzle is dirty. The fuel filter is dirty. The coils are limed or sooted. There is water in the fuel. The fuel pressure is low. The fuel pump pressure is weak.	Contact an authorized Delco service person. Replace the fuel filter. Delime or desoot the coils. Drain and replace the fuel. Contact an authorized Delco service person. Contact an authorized Delco service person.
There is smoke coming from the stack.	The wrong type of fuel is being used. There is not enough air to the burner. The fuel nozzle components are loose. The coils are sooted. The fuel nozzle is dirty.	Use only #1 or #2 diesel or kerosene. Contact an authorized Delco service person. Contact an authorized Delco service person. Clean the soot from the outside of the coils. Contact an authorized Delco service person.

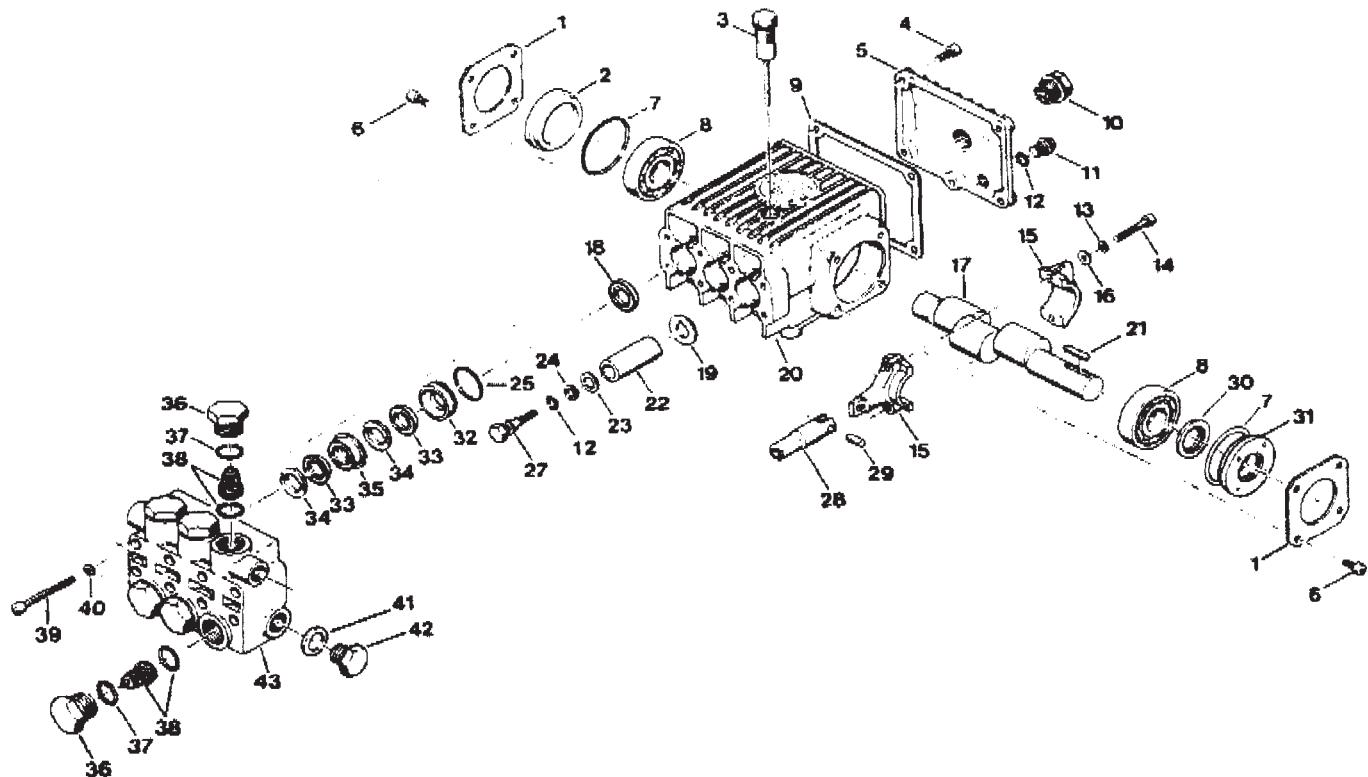
Delco Versa 100-200/Versa 100C-200C
Wiring Diagram



Delco Versa 100-200 and Versa 100C-200C
Electrode Check Schematic



**Delco Versa 100/ Versa 100C-200C
Pump Drawing**



Delco Versa 100 /100C-200C
Pump Parts List

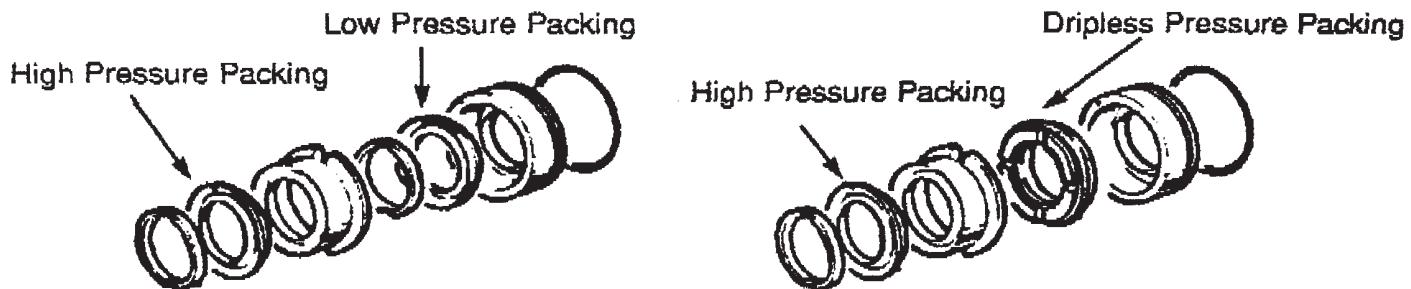
Ref.	Part No.	Description	Qty	Ref.	Part No.	Description	Qty
1	192323	Cover - Crankcase	2	27		Bolt - Plunger Kit 195406	ref.
2	198296	Seal - Oil Bearing	1	28	197701	Rod - Piston	3
3	197070	Plug, Oil	1	29	196967	Pin - Piston	3
4	198092	Screw - M6 x 14 Uni Soc Hd. Cap	5	30	198293	Seal Crankshaft	1
5	192322	Cover - Crankcase	1	31	198294	Seal - Oil Bearing Cover	1
6	198091	Screw M6 x 10 Uni Hex Hd.	8	32		Adapter - Female Kit 195422	ref.
7	196647	O-Ring	2	33		V-Packing Kit 195419	ref.
8	191615	Bearing - Crankshaft	2	34		Adapter - Male Kit 195421	ref
9	193895	Gasket - Crankcase Cover	1	35		Ring Intermediate Kit 195420	ref
10	193900	Gauge - Oil	1	36		Cover - Valve Hex Kit 195404	ref.
11	197066	Plug	1	37	196642	O-Ring	6
12	196644	O-Ring	4	38		Valve Assembly Check - Kit 195401	ref.
13	199586	Washer 6.4 x 10 x 0.7	6	39	191688	Screw M8 x 60 Uni	8
14	198209	Screw M6 x 35 Unit Soc Hd Cap	6	40	199580	Washer 8.4 x 13 x 0.8	8
15	191328	Rod assembly - Connecting	3	41	199583	Washer 21.5 x 27 x 1.5	1
16	199580	Washer 8.4 x 13 x 0.8	6	42	197067	Plug - Drain Inlet	1
17	192387	Crankshaft	1	43	195744	Manifold	1
18		Seal - Oil Kit 195423	ref.				
19	199581	Washer 14 x 28 x 0.5	3				
20	192374	Crankshaft	1				
21	195101	Key	1				
22	197076	Piston - Plunger	3				
23	197627	Washer - 14 x 18.5 x 0.5	3				
24	199589	Ring - Backup	3				
25	196646	O-Ring 3.47 x 1.78	3				
26							

Kit No.	Description	Qty
195401 Check Valve Kit	Ref. # 38, Valve Assembly (6)	1
195404 Hex Valve	Cover, O-Ring Kit Ref # 37, O-Ring (6) Ref. #36, Hex Valve Cover (6)	1
195406 Plunger Bolt Kit	Ref # 27, Plunger Bolt (3) Ref. #12, O-Ring (3) Ref #24, Backup ring (3) Ref #23, Washer (3)	1
195419	V-Packing Kit	1
195420	Intermediate Ring Kit	1
195421	Male Adapter Kit	1
195422	Female Adapter Kit Ref. #32, Female Adapter (3) Ref. #25, O-Ring (3)	1
195423	Oil Seal Crankcase Ref. #18, Oil Seal (3)	1
195427	Piston Repair Kit Ref. #34, Male Adapter (1) Ref. #33, V-Packing (1) Ref. #35, Intermediate Ring (1) Ref. #32, Female Adapter (1) Ref. #25, O-Ring (1)	3

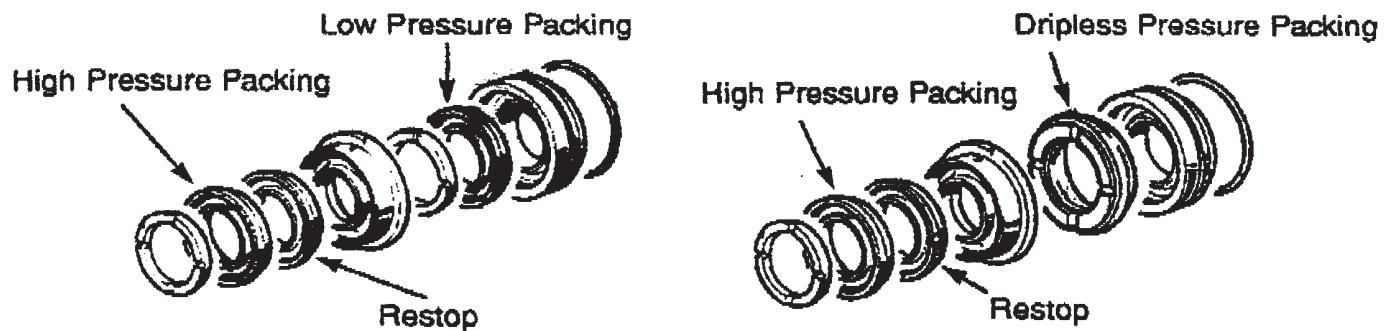
Old

New

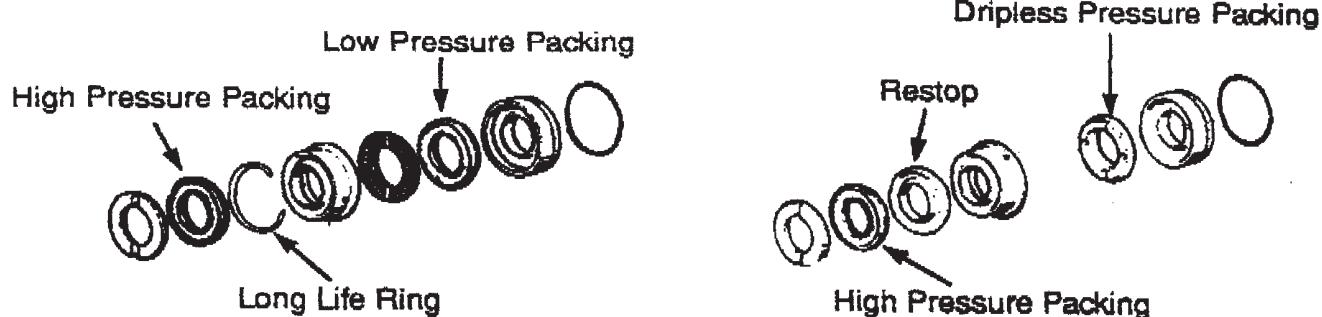
50 Series 20mm



EZ Series



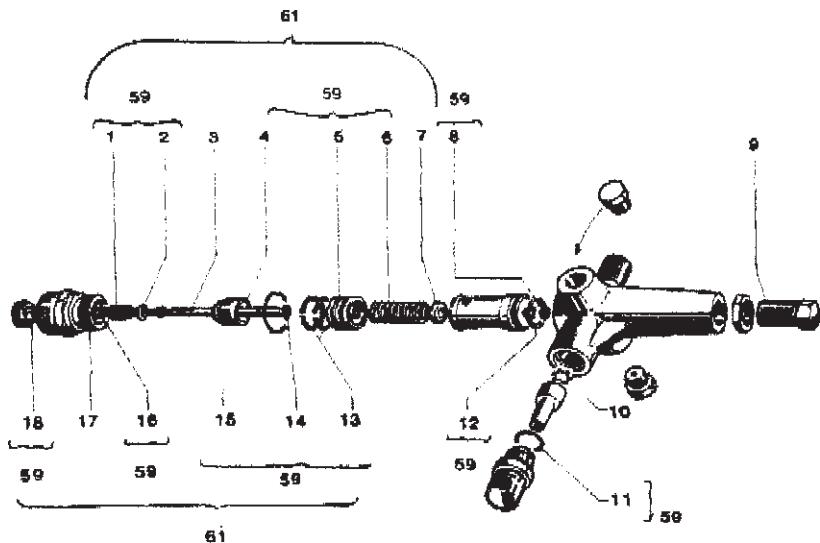
47 Series 20mm & 22mm



Kit Interchange/Cross Reference Sheet

Series & mm	Model Pump	Old Style Part & Kit Number	New Style Part & Kit Number	Production Date Codes	Notes
50 Series 20mm	T981 T991 LH T981 T9951 T9951 T9871 T91371	195419 Kit 19 (HP) (6) 90270300 High Pressure Packing	10612A Kit 19 (Dripless) (3) 90270300 High Pressure Packing (3) 90269800 Low Pressure Packing	5/95	To use old style packing use Kit 68 In new style pump include (3) 50100051 (Head Rings) or Kit 21
50 Series 44 Series 15 mm	TT9351 TT9441 TT1611 EZ9040G EZ2035G EZ2545G EZ2545E EZ2546S EZ3040S	Kit 88 (HP) (6) 90262000 High Pressure Packing (6) 90263200 Restop Ring	55384A Kit 88 (Dripless) (3) 90262000 High Pressure Packing (3) 90262200 Restop Ring (3) 90261700 Low Pressure Packing	5/95	To use old style packing use Kit 68 In new style pump include (3) 51100051 (Head Rings) or Kit 90
47 Series 16mm	T9281	Kit 109 (HP) (3) 90264200 High Pressure Packing (3) 90264300 Restop Ring (3) 90264100 Low Pressure Packing	55390A Kit 109 (Dripless) (3) 90264200 High Pressure Packing (3) 90264300 Restop Ring (3) 90264400 Low Pressure Packing	8/95	To use old style packing use Kit 109 HP In new style pump include (3) 47100351 (Head Rings) or Kit 108
47 Series 20 mm	TS2021 T-TS1011 T-TS1511 T-TS2011 T9121 T9131 T9161 T9211 T-TS 1011 LH	195408 Kit 8 (HP) (6) 90270500 High Pressure Packing	10613A Kit 8 (Dripless) (3) 90270500 High Pressure Packing (3) 20271000 Low Pressure Packing 55378A Kit 89 (Dripless) (3) 90270500 High Pressure Packing (3) 90270400 Restop Ring (3) 90271000 Low Pressure Packing	7/95	To use new style packing use Kit 68 in old style pump, include (3) 47216970 (Intermediate Rings) or Kit 71
47 Series 22 mm	T-TS21 LH T-TS921 T-TS1321 T-TS1621	195412 Kit 12 (HP) (6) 90272500 High Pressure Packing	10614A Kit 12 (Dripless) (3) 90272500 High Pressure Packing (3) 90272800 Low Pressure Packing 10616A Kit 14B (Dripless) (3) 90272500 High Pressure Packing (3) 90273000 Restop Ring (3) 90272800 Low Pressure Packing	9/95	To use new style packing Kit 14B in old style pump, include (3) 47217070 (Intermediate Rings) or Kit 14B, 10615A To use old style packing Kit 12 in new style pump, include (3) 46100051 (Head Rings) or Kit 11

**Delco Versa 100C
Unloader Valve**



Item No.	Part No.	Description
1		Only a kit item - see below*
2		" "
3		" "
4		" "
5		" "
6		" "
7		" "
8	196762	O ring 5.28 x 1.78 (see below*)
9	198067	Screw - adjustment
10	199600	Star washer
11	196763	O ring 13.95 x 2.62 (see below*)
12	56857A	O ring (in kit #59)
13		Only a kit item - see below*
14		Only a kit item - see below*
15	56610A	O ring 20.35 x 1.78 (w/kits 59 & 61)
16		Only a kit item - see below*
17		Only a kit item - see below*
18		Only a kit item* see below*

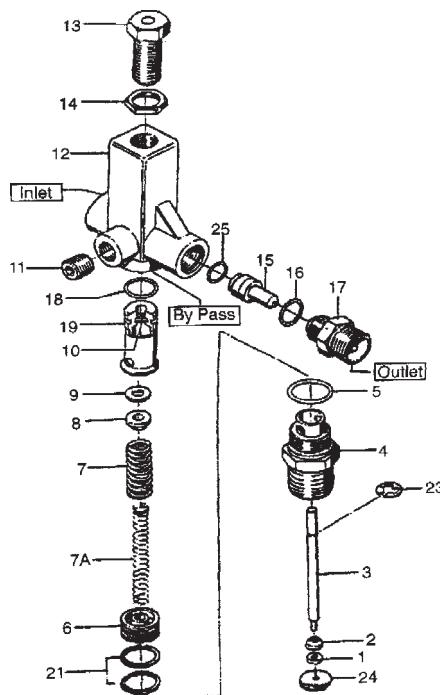
REF. Kit #59 195459	Kit, Maintenance Unloader Valve K-3 Unloader
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Kit 59 contains the following numbers: 1, 2, 4, 5, 6, 8, 11, 12, 13, 14, 15, 16 & 17

REF. Kit #61 195461	Kit, Complete Maintenance Kit K-3 Unloader
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Kit 61 contains the following numbers: 1,2,3,4,5,6,7,13,14,15,16,17,18

Delco Versa 100C
59420A Adjustable Unloader Valve



1		Only a kit item - see below*
2		" "
3		" "
4		" "
5		" "
6		" "
7		" "
8	196762	O ring 5.28 x 1.78 (see below*)
9	198067	Screw - adjustment
10	199600	Star washer
11	196763	O ring 13.95 x 2.62 (see below*)
12	56857A	O ring (in kit #59)
13		Only a kit item - see below*
14		Only a kit item - see below*
15	56610A	O ring 20.35 x 1.78 (w/kits 59 & 61)
16		Only a kit item - see below*
17		Only a kit item - see below*
18		Only a kit item* see below*

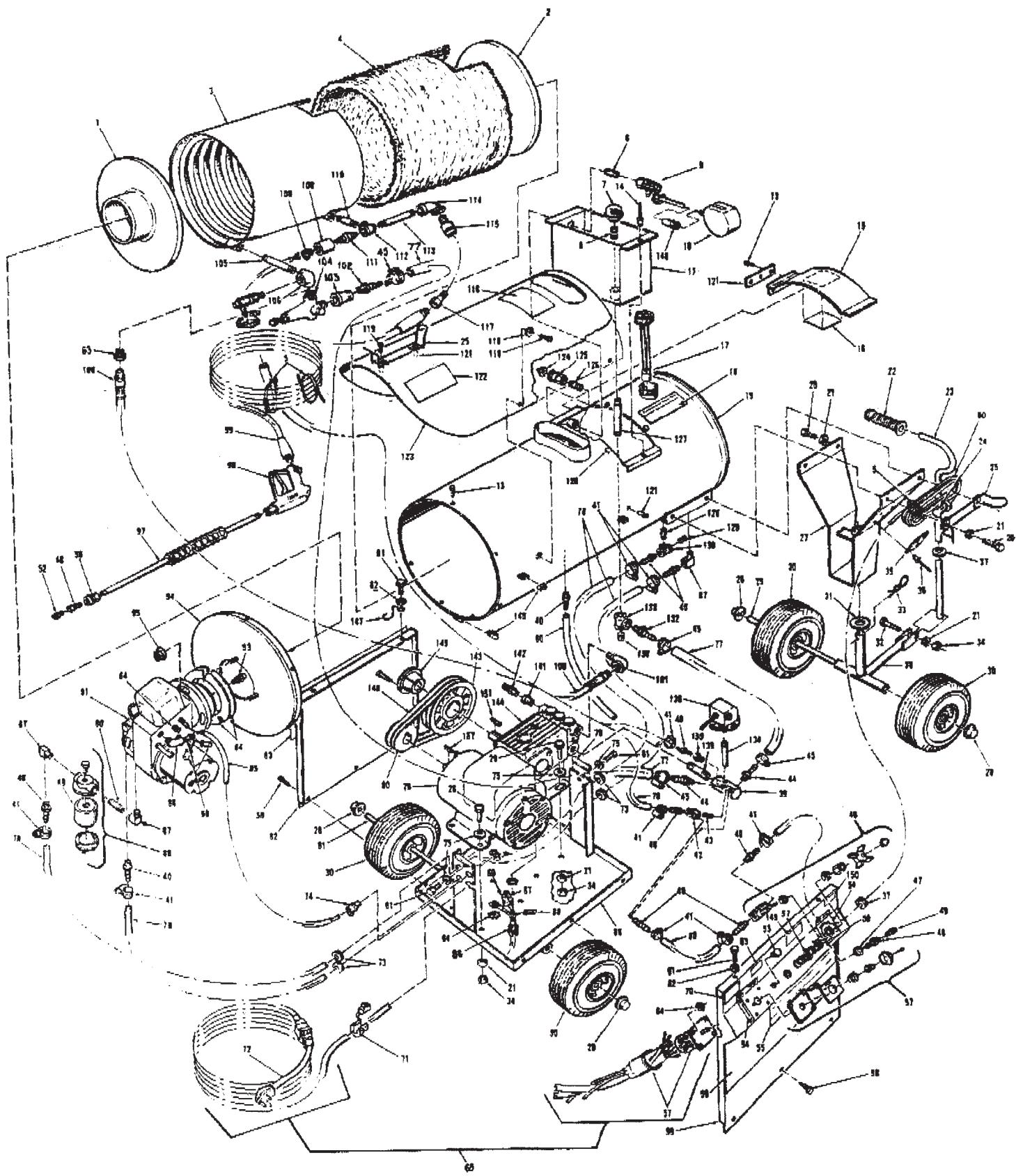
REF. Kit #59 195459	Kit, Maintenance Unloader Valve K-3 Unloader
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Kit 59 contains the following numbers: 1, 2, 4, 5, 6, 8, 11, 12, 13, 14, 15, 16 & 17

REF. Kit #61 195461	Kit, Complete Maintenance Kit K-3 Unloader
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Kit 61contains the following numbers: 1,2,3,4,5,6,7,13,14,15,16,17,18

Delco Versa 100/100C (Painted Models) Machine Assembly Drawing



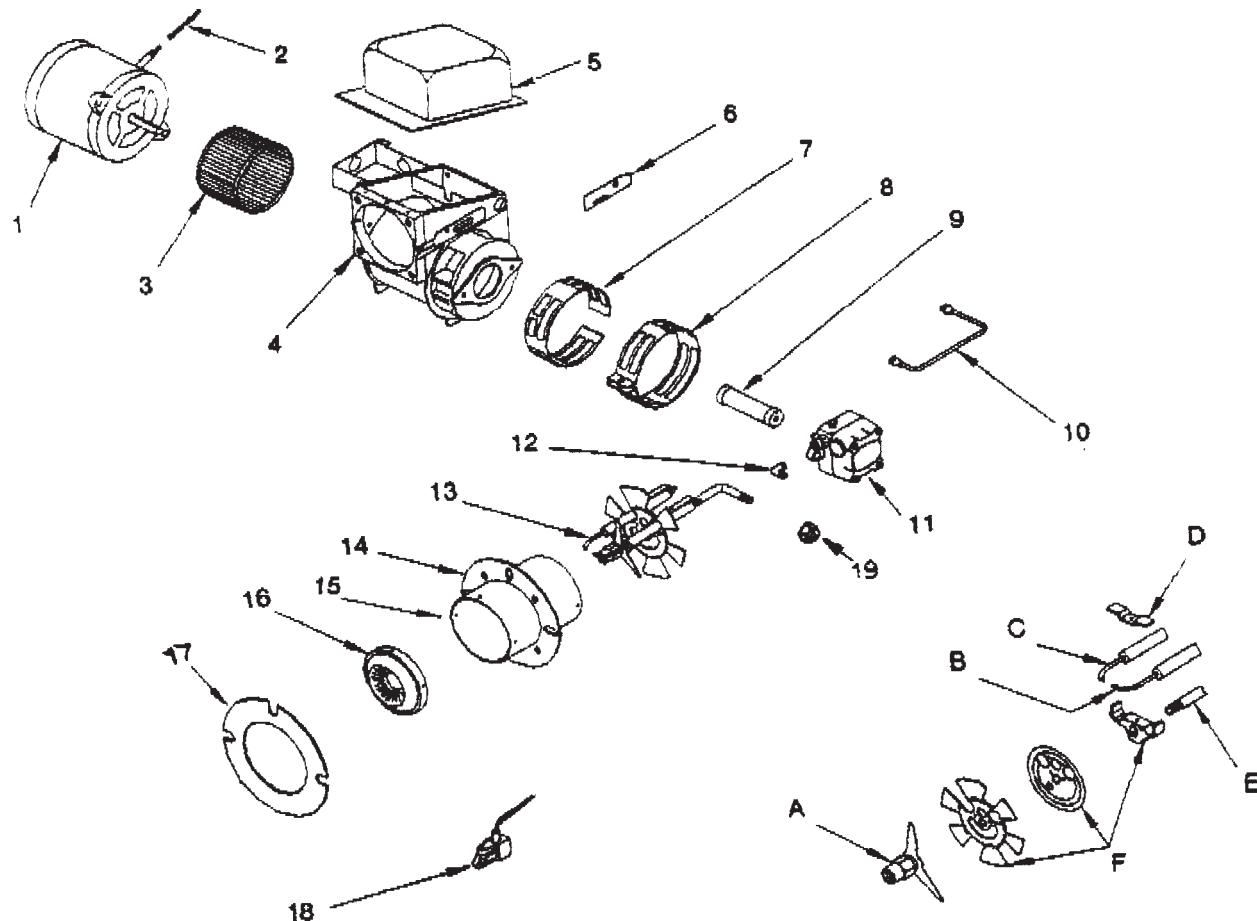
Ref.	# P/N	Description	Qty	
1	29645A	Pyrolite Drum Head Insulator	1	x x
2	29644A	Pyrolite Disc		
1	x	x		
3	61645A	Coil, 18" w/2 pancakes	1	x x
4	194803	Insulation	1	x x
5	699202	Wire Ties	7	x x
6	170219	Nipple 1/2" x 2 1/2"	1	x x
7	198072	Screen, Tank 1/2"	1	x x
8	170106	Nipple, Pipe	1	x x
9	199067	Valve, Float*	1	x x
10	191519	Ball, Float*	1	x x
11	198560	Tank, Float SS	1	x x
12	195593	Stop, Lid, Asm.	1	x x
13	170906	Screw #10 X 1/2	10	x x
14	930093	Pop, Rivet 1/8 x 1/4-5/16	1	x x
15	195589	Lid, Weldment., Float	1	x x
16	77030A	Decal, Instruction Lid	1	x x
17	52052A	Cap w/Fuel Guage	1	x x
18	77028A	Label, Fuel Caution	1	x x
19	68331A	Tank Asm. 18" Painted	1	x x
20	85811A	Screw 5/16-18 x 3/4	2	x x
21	980652	Washer, 5/16" Lock	13	x x
22	194208	Grip, Handle 7/8 I.D.	1	x x
23	194204	Handle, Tow	1	x x
24	29576A	Strainer	1	x x
25	194219	Rack, Hose	2	x x
26	85813A	Screw 5/16-18 x 1	10	x x
27	199004	Support V-Front	1	x x
28	50429A	Palnut 5/8"	4	x x
29	60140A	Axle, Front	1	x x
30	59958A	Wheel	4	x x
31	170875	Washer, 2 1/4" O.D. x 1 1/4" I.D.	1	x x
32	170818	Screw 5/16-18 x 1-3/4	1	x x
33	170940	Pin, #10 Hitch	1	x x
34	170854	Nut, 5/16-18 Hx	9	x x
35	192501	Plate, Serial	1	x x
36	170927	Rivet, Pop 1/8" S.S.	4	x x
37	193944	Grommet, Rubber 3/4" x 1 3/8"	2	x x
38	68369A	T-Bar Weldment	1	x x
39	195693	Manifold, Intake	1	x x
40	720271	Adapter 1/4"	9	x x
41	722021	Clamp, 1/4" Hose	9	x x
42	170066	Tee 1/4 Brass NPT	1	x
43	170086	Nipple 1/4 Close	1	x
44	170034	Hosebarb 5/8 x 3/8	2	x
	170034	Hosebarb 5/8 x 3/8	1	x
45	192116	Clamp - Hose #10	2	x
	192116	Clamp - Hose #10	4	x
46	199081	Metering Valve	1	x x
47	193947	Grommet, Rubber 7/16" x 15/16"	4	x x
48	197051	Nipple, Coupler, Quick 1/4"	4	x x
49	196180	Nozzle, 5.0 x 40° x 1/4" SS	1	x x
50	56255A	Nozzle, 5.0 x 15° x 1/4" SS	1	x x
	196180	Nozzle, 5.0 x 40° x 1/4" SS	1	x x
51	196179	Nozzle, 5.0 x 0° x 1/4" SS	1	x x
52	196155	Nozzle, 5.0 x 25° x 1/4" SS	1	x x
53	52041A	Plug 1/2"	1	x x
54	77031A	Decal, Instruction	1	x x
55	74102A	Label Versa 100 I.D.	1	x
	72123A	Label, Versa 100C I.D.	1	x
56	74105A	Label, Sweep Left	1	x x
57	198450	Switch, Cam 3 hp	1	x x
58	170910	Screw, Tapping	6	x x
59	66370A	Panel, Weldment	1	x x
60	170974	Tubing, PVC 1/4 (metering valve to strainer)	8"	x x
	170974	Tubing, PVC 1/4 (metering valve to manifold)	19"	x x
	170974	Tubing, PVC 1/4 (tank to drain)	15"	x x

*Note: 191337 Valve Asm. Float includes 9, 10, 148

**Delco Versa 100/100C Painted
Machine Assembly Parts List**

Ref.	# P/N	Description	Qty	Versa 100C Versa 100
119	171112	Screw 1/4-20 x 1/2	6	x
121	170793	Nut, Clinch 1/4-20	6	x x
122	77032A	Label, Danger Steam	1	x x
123	198326	Shield, Heat 18" Painted	1	x x
124	198078	Screen, Hose, Washer	1	x x
125	170071	Fitting 3/4 x 1/2 Female	1	x x
126	170216	Nipple, Pipe 1/2 x Close Galv.	1	x x
127	170222	Nipple 1/2" x 6"	1	x x
128	170402	Nipple, 1/4 Close Blk.	1	x x
129	170486	Plug, Pipe 1/4 Blk.	1	x x
130	170252	Tee, Pipe 1/4 Galv.	1	x x
131	195101	Key - 8 x 7 x 25	1	x x
132	194402	Hosebarb 5/8 x 3/8 w/ 7/32" OR	1	x x
133	170265	Tee 1/2 x 1/2 x 3/8	1	x x
134	56329A	Nipple 1/4 x 2 1/2 Sch. 40	1	x x
135	170221	Nipple, Pipe 1/2 x 4 Galv.	1	x x
136	198433	Switch, Vacuum	1	x x
137	80501A	Key 3/16" x 3/16" x 1 1/4"	1	x x
138	170014	Plug, Pipe 1/2' Brass	1	x x
139	231131	Bushing, Reducing	1	x
140	170850	Nut, Panel 5/16-18	6	x x
141	170004	Bushing, Pipe 3/8 x 1/8 Brass	1	x x
142	199027	Valve, Air 1/8" NPT Brass	1	x x
143	57239A	Pulley AK59H	1	x x
144	197283	Pump, Water W99	1	x x
145	191773	Bushing, Pulley H x 24mm	1	x x
146	191679	Belt-V A30	1	x x
147	194117	Hook, Gun	2	x x
148	29575A	Nut, Retaining*	1	x x
149	77024A	Label, Warning, Electric	1	x x
150	77039B	Label, Made in USA	1	x x

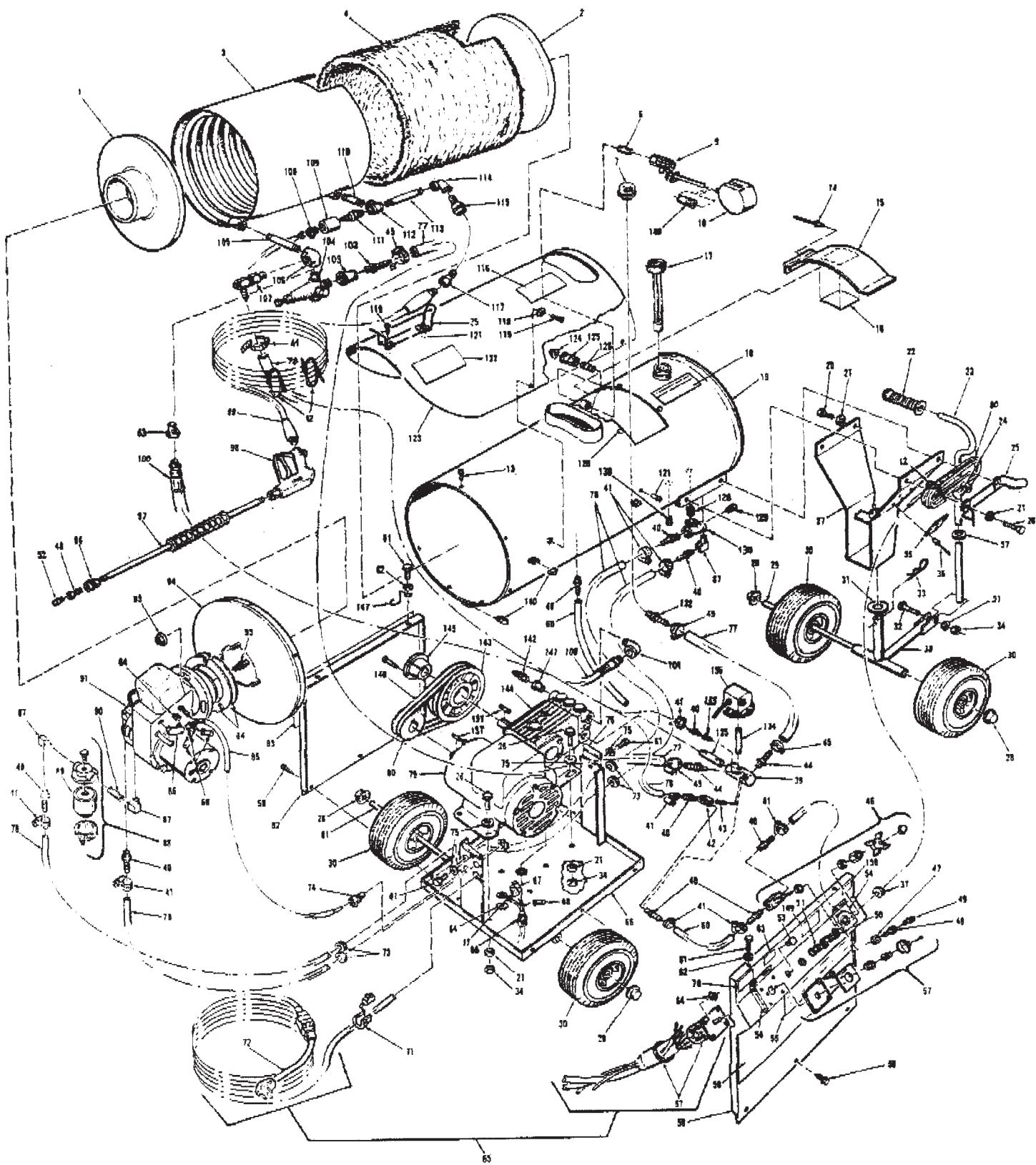
**Delco Versa 100/Versa 100C
Burner Drawing & Parts List**



Ref.	Part No.	Description	Qty.
1	44629A	Motor	1
2	52746A	Motor Cord Cover	1
3	50664A	Blower Wheel	1
4	54861A	Housing-Fan Assembly	1
5	48410A	Transformer Base	1
6	52747A	Slot cover	1
7	50502A	Inner Air Band-Burner	1
8	50503A	Outer Air Band-Burner	1
9	52643A	Coupling	1
10	55634A	Oil Line Assembly	1
11	197216	Pump Fuel Unit	1
12	193107	Oil Line Assembly	1
13	54235A	Gun Assembly	1
A	50330A	Nozzle Adapter	1
B	53529A	Electrode Assembly (LH)	1
C	53530A	Electrode Assembly (RH)	1
D	51816A	Electrode Clamp	1
E	54008A	Oil-Pipe Fitting	1
F	56427A	Support Assembly	1
14	193615	Flange, Burner	1
15	59308A	Air Tube	1
16	51817A	Air Cone - Burner	1
17	193871	Gasket - Burner	2
18	59747A	Valve, Sol., Burner, 115V (100C only)	1
19	195609	Locknut, Oil Line	1
20	51818A	Flex Conduit, Burner (not shown)	

***Note:** Ref #18 - 50715A, Bolt Fuel Valve, & 58142A, Seal Washer Fuel Valve Qty. (2) not shown

Delco Versa 100C-200C Stainless Steel
Machine Assembly Drawing



**Delco Versa 100C-200C Stainless Steel
Machine Assembly Parts List**

Ref.	# P/N	Description	Qty
1	29645A	Pyrolite drum head insulator	1
2	29644A	Pyrolite Disc	1
3	61645A	Coil, 18" w/2 pancakes	1
4	194803	Insulation	1
5			
6	170219	Nipple 1/2" x 2 1/2"	1
7	198072	Screen, Tank 1/2"	1
9	199067	Valve, Float*	1
10	191519	Ball, Float*	1
11	45400A	Wire Nut - Red	1
12	699202	Wire Tie	7
13	170906	Screw #10 X 1/2	7
14	930093	Pop, Rivet 1/8 x 1/4-5/16	3
15	16800A	Lid, Weldmt., Float	1
16	77030A	Decal, Instruction Lid	1
17	52052A	Cap, Fuel Gauge	1
18	77028A	Label, Fuel Caution	1
19	68353A	Tank Asm. 18" S.S.	1
20	85811A	Screw 5/16-18 x 3/4	2
21	980652	Washer, 5/16" Lock	13
22	194208	Grip, Handle 7/8 I.D.	1
23	64435A	Handle, Tow	1
24	29576A	Strainer w/check valve	1
25	194219	Rack, Hose	2
26	85813A	Screw 5/16-18 x 1	10
27	68502A	Support V-Front	1
28	50429A	Palnut 5/8"	4
29	60140A	Axle, Front	1
30	59958A	Wheel	4
31	170875	Washer, 2 1/4" O.D. x 1 1/4" I.D.	1
32	170818	Screw 5/16-18 x 1 3/4	1
33	170940	Pin, #10 Hitch	1
34	170854	Nut, 5/16-18 Hx	9
35	192501	Plate, Serial	1
36	170927	Rivet, Pop 1/8" S.S.	4
37	193944	Grommet, Rubber 3/4" x 1 3/8"	2
38	68368A	T-Bar Weldment	1
39	195693	Manifold, Intake	1
40	720271	Adapter 1/4"	9
41	722021	Clamp - 1/4" Hose	9
42	170066	Tee 1/4 Brass NPT	1
43	170086	Nipple 1/4 Close	1
44	170034	Hosebarb 5/8 x 3/8	2
45	192116	Clamp - Hose #10	4
46	199081	Metering Valve	1
47	193947	Grommet, Rubber 7/16" x 15/16"	4
48	197051	Nipple, Coupler, Quick 1/4"	4
49	196180	Nozzle, 5.0 x 40° 1/4"SS	1
50	56255A	Nozzle, 5.0 x 15° x 1/4"SS	1
51	196179	Nozzle, 5.0 x 0° x 1/4"SS	1
52	196155	Nozzle, 5.0 x 25° x 1/4"SS	1
53	52041A	Plug - 1/2"	1
54	77031A	Decal, Instruction Control Panel	1
55	72123A	Label, Versa 100C I.D.	1
56	74105A	Label, Sweep Left	1
57	198450	Switch, Cam 5 hp	1
58	170910	Screw, Tapping 5/16" x 3/4"	6
59	66358A	Panel - Weldment, Control	1
60	170974	Tubing, PVC 1/4" (strainer to metering valve) (metering valve to manifold) (bottom of tank to drain)	8' 19" 15"
61	85814A	Screw 5/16-18 x 1 1/4"	6
62	170886	Washer, Flat 1/4	4

*Note: 191337 Valve Asm. Float
includes 9, 10, 148

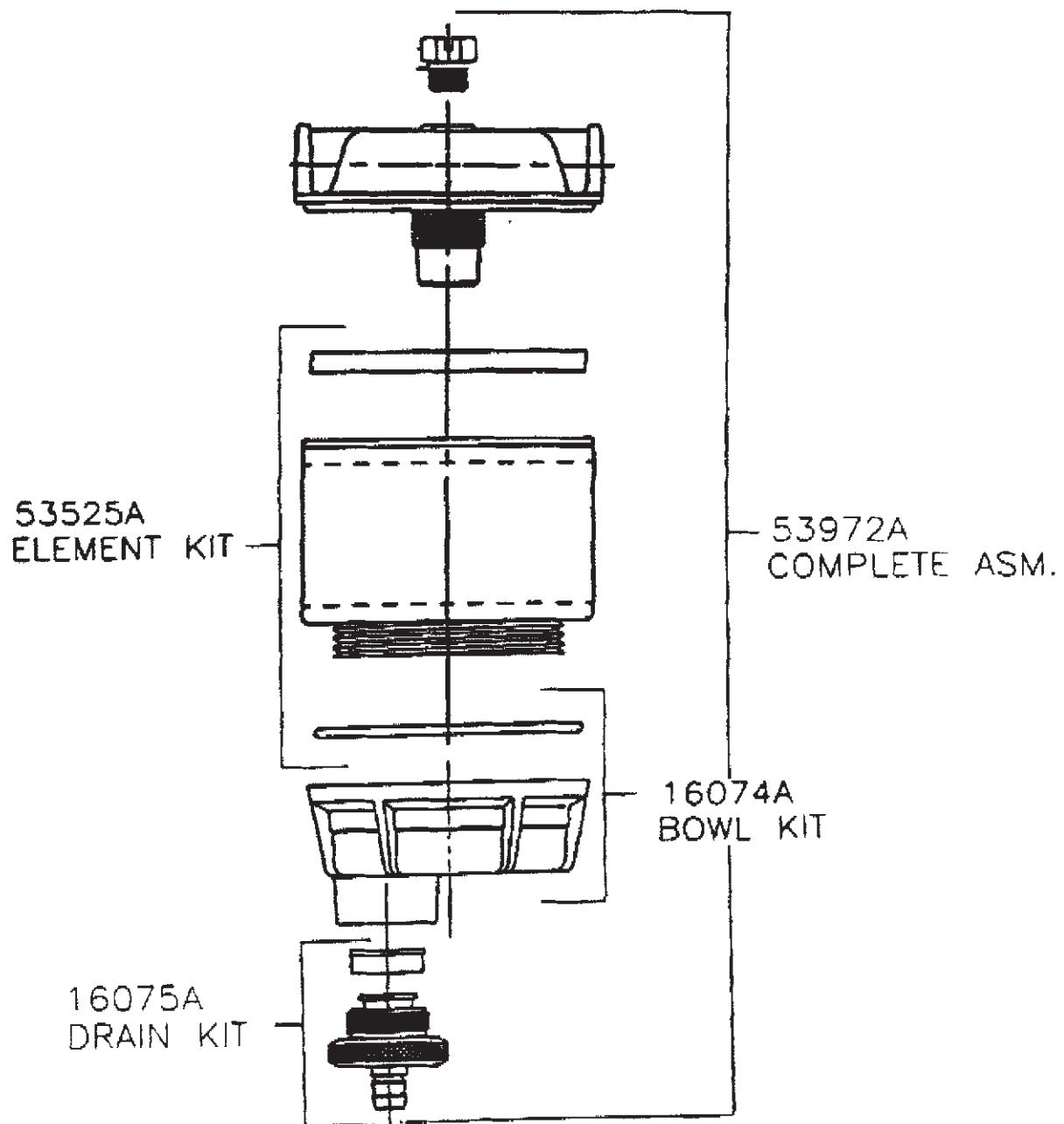
Ref.	# P/N	Description	Qty
64	980603	Washer, Star	3
65	199732	Harness, Wiring O/F 115V	1
66	68403A	Under Carriage 18"	1
67	170667	Nut, Wire, Yellow	1
68	911177	Nut, Wire, Orange	4
70	77027A	Label, Warning	1
71	191775	Bushing, Strain, Relief	1
72	43102A	GFCI 35' 115V 20A	1
73	193943	Grommet 1/2 x 31/32	4
74	170636	Connector Conduit 3/8, I-Screw	1
75	170860	Washer, Flat 5/16	12
76	193951	Trim (2 @ 3")	6"
77	170966	Hose, 2 Braid 5/8, (manifold to tank)	13"
	170966	Hose, 2 Braid 5/8, (manifold to unloader)	18"
78	170964	Hose, 1/4 Fuel (burner to tank-2 @ 52")	104"
	170964	Hose, 1/4 Fuel (manifold to relief valve)	21"
79	44803A	Motor 2 hp-115/230V	1
80	57240A	Pulley - AK34 x 5/8"	1
81	60139A	Axle, Rear 18"	1
82	66359A	Panel, Rear	1
83	74106A	Label, Sweep, Right	1
84	193871	Gaskets, Burner	2
85	170963	Sleeving, PVC 1/2	19"
86	170641	Strain, Relief 3/8 x 90°	2
87	170040	Elbow 1/4 x 90	3
88	53972A	Filter, Asm., Fuel	1
89	53525A	Filter, Replacement Element	1
90	170207	Nipple 1/4 x 2 1/2	1
91	29620A	Burner, Oil 115V w/Solenoid	1
93	196379	Nozzle, Fuel 1.50 x 80°	1
94	60773A	Burner Head	1
95	171101	Nut 3/8-16, Whizlock	3
96	192277	Coupler, Quick 1/4" Female	1
97	53508A	Extension 1/4 x 34"	1
98	54223A	Trigger, Gun, Asm.	1
99	194350	Hose Asm. 3/8" R1 x 50'	1
100	194387	Hose, 3/8" x 26"	1
101	170242	Elbow, Street 3/8 Galv.	2
102	170027	Hosebarb 5/8 x 1/2	1
103	170228	Coupling, 3/4 x 1/2	1
104	59403A	Valve, Unloader K3.1	1
105	170419	Nipple, Pipe 1/2 x 5 1/2	1
106	170248	Elbow 1/2 Galv., Side Outlet	1
107	59733A	Relief, Valve 2K	1
108	170637	Connector, Conduit 3/8 2-Screw	1
109	170956	Coupling, Pipe, 1/2" PVC	1
110	170418	Nipple, Pipe 1/2 x 5 Blk.	1
111	198491	Switch, Hi-Temp 230°	1
112	170258	Tee, Reducing 1/2" x 3/8" x 1/2"	1
113	170215	Nipple 3/8 x 6	1
114	170237	Elbow, 3/8" Galv.	1
115	192276	Coupler, Quick 3/8 MPT	1
116	77033A	Label, Warning	1
117	197056	Nipple, Coupler, Quick 3/8 Male	1
118	170858	Washer, Flat 1/4" SS	4
119	171112	Screw 1/4-20 x 1/2 Truss	6
120	191785	Button, Darts	4
121	170793	Nut, Clinch 1/4-20	6
122	77032A	Label, Danger Steam	1
123	67526A	Shield, Heat 18" S.S.	1
124	198078	Screen, Hose, Washer	1
125	170071	Fitting 3/4 x 1/2 Female	1
126	170216	Nipple, Pipe 1/2 x Close Galv.	1
127	170222	Nipple, 1/2" x 6"	1
128	170402	Nipple, 1/4 Close Blk.	1

(Part list continued on next page.)

**Delco Versa 100C-200C Stainless Steel
Parts List**

Ref.	# P/N	Description	Qty
129	170486	Plug, Pipe 1/4 Blk.	1
130	170252	Tee, Pipe 1/4 Galv.	1
131	195101	Key	1
132	194402	Hosebarb 5/8 x 3/8 (w/ 7/32" OR)	1
134	56329A	Nipple 1/4 x 2 1/2 Sch. 40	1
135	170221	Nipple, Pipe 1/2 x 4 Galv.	1
136	198433	Switch, Vacuum	1
137	80501A	Key	1
138	170014	Plug, Pipe 1/2" Brass	1
140	170850	Nut, Panel 5/16-18	6
141	170004	Bushing, Pipe 3/8 x 1/8 Brass	1
142	199027	Valve, Air 1/8" NPT Brass	1
143	57239A	Pulley, AK59H	1
144	197283	Pump, W99	1
145	191773	Bushing, Pulley H x 24mm	1
146	191679	Belt-V, A30	1
147	194117	Hook, Gun	2
148	29575A	Nut, Retaining*	1
149	77024A	Label, Warning-Electric	1
150	77039B	Label, Made in USA	1

Delco Versa 100/100C-200C
Fuel Filter Components (Optional filter shown)





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